

ABSTRACT

A translucent ceramic principally contains a composition represented by the formula  $\text{Ba}\{\text{Ti}_{x_1}\text{M}_{x_2}(\text{Mg}_{1-t}\text{Zn}_t)_y(\text{Ta}_{1-u}\text{Nb}_u)_z\}_v\text{O}_w$ , wherein M is at least one selected from the group consisting of Sn, Zr, and Hf; w is a positive number for maintaining the electrical neutrality;  $x_1 + x_2 + y + z = 1$ ;  $0.015 \leq x_1 + x_2 \leq 0.90$ ;  $0 < x_1 \leq 0.90$ ;  $0 \leq x_2 \leq 0.60$ ;  $1.60 \leq z / y \leq 2.40$ ;  $1.00 \leq v \leq 1.05$ ;  $0 < t < 1$ ; and  $0 \leq u \leq 1$ . The translucent ceramic has high linear transmittance over a wide wavelength range and a large refractive index, is controllable in refractive index and Abbe number in a wide range, and is not birefringent. Therefore, lenses (2) made of the translucent ceramic are suitable for optical pickups (9) and other devices that must be small-sized and thin.